

Livestock Regulations Stakeholder Advisory
Group

Proposed Act
For
Intensive Livestock Operations

April 2000

Sustainable Livestock Production Act

Section	Proposed	Reason
Livestock Operation	Livestock operation means an operation where the livestock are confined in a facility at a density of 43 animal units per acre for greater than 90 consecutive days and the producer has to manage the manure from the facility. Facilities do not include seasonal feeding and bedding sites.	
Intensive Livestock Operation	Intensive livestock operation means a livestock operation (as defined above) where the total number of animals in confinement on the farm equals or exceeds 300 animal units.	
General Requirements		
1	All agricultural operations must comply with the Act and the Regulations where applicable.	Establishes the authority of the Act, Regulations and any Standards Document referenced by the Legislation.
2	Operators of livestock operations and agricultural operations must take all reasonable precautions through acceptable agricultural practices to: (a) prevent the contamination of ground and surface waters by manure or run-off water from manure, and (b) the generation of odours from the storage, transport and application of manure to land.	Manure and run-off from manure may contaminate ground and surface water. Odour from manure storage, transport and application are also public concerns. There are cost-effective methods of managing manure to reduce odour and safeguard ground and surface water.
3	The Minister in recognition of the integral relationship between agricultural production and the environmental sustainability shall cooperate with, and assist, the Minister of Environment in promoting and enforcing environmental stewardship.	Protecting the environment is a major focus of this Legislation. This Legislation is complementary to the Environmental Protection and Enhancement Act.
4	The new owner must notify Alberta Agriculture, Food and Rural Development (AAFRD) when an intensive livestock operation changes ownership.	The province needs to know who is responsible for the operation.
5	Operators of livestock operations and agricultural operations must comply with the requirements specified in their Authorizations, Approvals or Administrative Order.	As well as the Act and Regulations, the Approval, Authorization or Administrative Order will specify the standards that operators are to follow.
6	Manure cannot be transferred from an intensive livestock operation to any person, who will be storing the manure for more than six months, unless that person has an Authorization from AAFRD for the storage facility.	Long term manure storage facilities must meet AAFRD standards in order to prevent contamination of surface and groundwater.

7	When it is specified in the Regulations or an Approval, Authorization or Administrative Order that manure management records must be kept, the agricultural producer must keep the information specified in Section 26 of the Regulations. The agricultural producer must provide these records to AAFRD or an inspector or investigator appointed under the Act when requested.	Record keeping is an important aspect of manure management. Records are useful tools for operators so they can demonstrate how they are complying with the standards.
Notification		
8	When the Legislation is proclaimed, AAFRD can, in writing, impose any standard specified in the Standards Document on: a) any intensive livestock operation, or b) any livestock operation located in an area as defined in Section 2 in the Regulations, if there is evidence that the livestock operation is creating an unacceptable impact on the environment.	This allows the province to address any problem situations that relate to upgrading of existing operations.
Approvals and Authorizations		
9	Written Authorization must be obtained from AAFRD to apply manure on frozen and snow-covered land. The Authorization will be valid for the period specified in the Authorization unless it is renewed. The application for the Authorization must include the information specified in Section 6 of the Regulation.	There places where winter spreading can be done without impacting ground and surface water quality. Each site has to be assessed before an authorization is issued to ensure there won't be contamination problems.
10	Written Authorization must be obtained from AAFRD to apply manure for soil erosion control. The Authorization will be valid for the period specified in the Authorization unless it is renewed. The application for the Authorization must include the information specified in Section 7 of the Regulation.	Manure can be used to control soil erosion. Each site must be assessed and monitored.
11	Written Authorization must be obtained from AAFRD to exceed the nutrient limits specified in the Regulations or Standards Document. The Authorization will be valid for the period specified in the Authorization unless it is renewed. The application for the Authorization must include the information specified in Section 8 of the Regulation.	Crops utilize nitrogen at different rates; therefore, nitrogen levels can be managed through crop rotations.

12	Existing livestock operations and intensive livestock operations that are not increasing the number of animal units must obtain written Authorization from AAFRD prior to reconstructing or modifying an existing liquid manure storage facility. These storage facilities must be constructed to the standards specified in the Standards Document.	Liquid manure storage facilities can have a greater impact on the environment if they are not designed and constructed properly.
13	Livestock operations and intensive livestock operations may construct liquid manure storage facilities that have less storage volume than the volume specified in the standards document if they have an Approval from AAFRD.	Through the proper management and use of manure, producers can reduce the volumes of manure in storage.
14	New and expanding livestock operations must obtain an Approval prior to construction if they: (a) meet the thresholds specified in Section 1 of the Regulations or (b) meet the siting criteria specified in Section 2 of the Regulations.	Large livestock facilities as well as facilities near ground and surface water sources require a detailed siting and operational review to get an Approval.
15	Approval holders can apply for amendments to their Approvals.	Approval holders may find, over time, that the terms and conditions in their Approvals are inappropriate, and do not reflect advances in technology.
16	Prior to submitting an application for an Approval or amendment to the approval, the applicant must: (a) notify the municipality in which the facility is located, and (b) take all reasonable measures to notify persons who own land and/or reside on land within the distance prescribed in Section 9 of the Regulations, and (c) take all reasonable measures to notify municipalities and persons with a license or Approval issued under the Water Act as specified in Section 10 of the Regulations.	This ensures the applicant will notify people who may be affected by the project.
17	An application for an Authorization, Approval or amendment to an Approval must be made in a manner as specified in the Regulations.	Information will be required to evaluate the application and any potential Approval conditions.

18	AAFRD will not make a decision on the application for Approval or an amendment to an Approval unless the application is complete. The applicant will be notified if the application is incomplete and what information is required. If the information is not supplied by the applicant within the timeline specified in Section 4 of the Regulations, the application can be rejected. AAFRD will refer copies of the application to the Regional Health Authority, Alberta Environment and the municipality for their review and comment.	AAFRD will first review an application to determine if it is complete. A full review will be initiated once all the necessary information is provided. AAFRD must have all the information before making the final decision.
19	When the application for an Approval or amendment to an Approval is considered complete, AAFRD will take all reasonable measures to notify the people defined in Sections 9 and 10 of the Regulations to advise them that an application is being reviewed. These people will have 30 days to notify AAFRD of any concerns regarding the project. AAFRD must consider these concerns and the comments from the reviewing agencies when it makes its decision about the application.	This ensures that AAFRD is aware of all relevant issues prior to making a decision on Approval.
20	AAFRD can include terms and conditions including standards from the Standards Document in Authorizations and Approvals.	AAFRD must have the ability to include appropriate terms and conditions in Authorizations and Approvals.
21	AAFRD can amend an Approval if required after consultation with the Approval holder and those persons specified in Sections 9 and 10 in the Regulations about the proposed amendment.	After an Approval is issued, unforeseen problems or deficiencies may surface that need to be corrected.
22	When AAFRD issues, amends or rejects an Approval, it must provide notice and reasons for the decision.	This ensures that all parties with an interest in the project are notified whether the Approval or amendment was issued.
23	AAFRD may cancel an Approval after the owner declares to AAFRD that the facility has ceased to operate.	Approvals do not have expiry dates. Subsequently AAFRD must have the authority to cancel an Approval when a producer wishes to cease operations.

Appeals		
24	<p>Appeals can be initiated by the applicant or Approval holder for:</p> <ul style="list-style-type: none"> (a) the refusal of AAFRD to issue or amend an Approval, or (b) the conditions that AAFRD places in an Approval, or (c) the suspension of an Approval. 	Applicants have the right of appeal if they do not agree with the decision.
25	<p>Appeals can be initiated by:</p> <ul style="list-style-type: none"> (a) all persons who are entitled to submit their concerns about the project to AAFRD, and (b) subsequently do so, and (c) are able to demonstrate that they may be affected by the operation. 	Provides those persons who could be affected by a livestock operation with an opportunity to seek an independent review of a decision made by AAFRD.
26	<ul style="list-style-type: none"> (i) Standards in the Standards Document that have specified values or prescribed operating practices, that have been included in the Approval, cannot be appealed. (ii) Conditions in Approvals that: <ul style="list-style-type: none"> (a) are not in the Standards Document, or (b) are in the Standards Document but do not have a specified value or prescribed operating practice, can be appealed. 	The Expert Committee that developed the Standards Document believes that the standards are stringent enough for all operations and will protect the environment. Conditions placed in Approvals that are not specified in the Standards Document should be subject to an appeal.
27	Producers can appeal an Administrative Order.	Producers should have the ability to challenge any enforcement provision received.
28	The Minister will establish the Sustainable Livestock Operations Appeal Board to hear appeals.	A board with expertise in siting livestock operations is required to hear appeals. This approach is consistent with other Legislation.
29	People who have standing, as specified in Sections 24 and 25 of this Act, have 15 days from being notified of the decision to file a Request for an Appeal with the Board.	This time frame to launch an appeal is consistent with other Legislation.
30	The Appeal Board may require the appellant to provide additional information.	This ensures that the Appeal Board has the information it needs to make a decision.

31	<p>The Board may dismiss an appeal if it:</p> <ul style="list-style-type: none"> (a) finds the Request for an Appeal to be frivolous or vexatious; (b) finds the appellant fails to provide adequate reasons as to how he is affected by the decision; (c) finds the appellant fails to appear for the appeal within 1 hour from the time set forth in the notice given; or (d) does not have the jurisdiction to hear the matter being appealed. 	Allows the Board to dismiss appeals that do not appear to have any substance in fact or if the appellant lacks sufficient interest in the appeal.
32	The Appeal Board must provide written notice with reasons if it dismisses a Request for an Appeal.	The Board must clearly specify its reasons for dismissing an appeal.
33	<p>If the Board approves the Request for an Appeal it must:</p> <ul style="list-style-type: none"> (a) convene a hearing within 45 days of receiving the request of an appeal; (b) notify all parties to the appeal at least 7 days prior to the appeal as to the time and location of the appeal. 	Time-lines ensure that the board keeps the appeal process moving.
34	The Board may consider written appeals if the parties agree that an oral hearing is not required.	Gives some flexibility to accommodate different circumstances.
35	Subject to the Act and Regulations, the Board may establish administrative procedures as required.	This would involve many administrative items such as where appeals are held, time of day, attendance, order of discussion, cross-examination, closing remarks, use of pre-hearing meetings and size of appeal panel.
36	<p>The Appeal Board may:</p> <ul style="list-style-type: none"> (a) confirm, reverse or vary the original decision; or (b) impose additional conditions; or (c) issue a stay of an Administrative Order until the Order can be dealt with at an appeal hearing. <p>All decisions of the Board are final and non-appealable to the Court of Appeal.</p>	The Board is the final decision-maker and is accountable for its decisions. As a result, it must have the power to uphold, reject or change Approvals and Orders.
37	The Board must discontinue its proceedings if the appellant withdraws their appeal in writing.	If the appeal is resolved by some other process the Board does not need to hear it.
38	The Appeal Board's decision must be given to the parties of the appeal within 15 working days of the conclusion of the appeal hearing. Written decisions will follow.	This ensures a timely decision.

39	The Board may extend the time period of an appeal where the Board is of the opinion that there are sufficient grounds to do so.	Allows some flexibility for unusual cases, if parties are not available or more information is required to make the decision.
Compliance and Enforcement		
40	The Minister may appoint employees of the government as inspectors and investigators.	The Province will be responsible for the enforcement of the legislation and standards.
41	Inspectors or investigators, appointed through agreements with the Minister, will be provided with identification.	Non-departmental people may be appointed as inspectors and investigators.
42	A Peer Review process shall be established to investigate complaints about livestock operations, odour and the spreading of manure and make recommendations to the operator and AAFRD.	It is recognized that compliance and long term change is best achieved when producers and their peers work together to address problem situations.
43	When AAFRD receives a complaint, it can initiate a peer review process when appropriate. An assessment report will be provided to the operator after the review has taken place.	Peer review can be an effective way of working with producers to rectify problems.
44	<p>In order to carry out the provisions of this Act and his duties, an inspector or investigator can, at any reasonable time, with the consent of the landowner or resident, or with a Right of Entry Order, enter any land or premises, excluding the dwelling house, and inspect it or any livestock, soil, water, equipment or structure on that land or premises. In the course of exercising his powers the inspector or investigator can:</p> <ul style="list-style-type: none"> (a) require that any equipment used to manage manure be operated, used or set in motion under conditions specified by the inspector; (b) take samples of any substance or thing; (c) conduct tests or take measurements; (d) make copies of or take extracts from any records; (e) record or copy any information by any method; (f) take photographs or audio-video records; (g) make reasonable inquiries of any person, orally or in writing. 	To effectively do their duties, inspectors must be able to enter onto property to do inspections, collect samples and check records.

45	An inspector or investigator may remove manure management records, as defined in Section 26 of the Regulations, and shall give a receipt to the person from whom they were taken and shall promptly return them on completion of the examination.	In the course of their duties inspectors may need to take files back to their office to review and copy them.
46	<p>When AAFRD is of the opinion that a livestock or agricultural operation is in violation of the Act, and there is insufficient time to establish a peer review; or has not complied with the peer review assessment report, it can issue an Administrative Order to the person responsible for the operation;</p> <ul style="list-style-type: none"> (c) requesting the person to develop a plan and schedule to come into compliance with the Act; (d) specifying the measures that must be taken to comply with the Order; and (e) stopping the operation from continuing operations for a specified period. <p>The reasons for the Order must be provided to the person responsible for the operation when it is served.</p> <p>If a livestock operation ceases to operate or is abandoned, AAFRD may issue an Administrative Order respecting the clean up of the facility as specified in the Regulations.</p>	When producers choose not to comply with the Legislation or Standards and are causing significant problems, timely action must be taken to correct the problem. Outlining the required corrective action in the Order makes it clear to the producer what he has to do.
47	A person who receives an Administrative Order must comply with the Order or apply to the Appeal Board for a stay of the Order within 10 working days.	Provides producers with an opportunity to seek an independent review of a decision made by AAFRD. Producers should also be able to go to an appeal board to have the Order suspended while the merit of the Order is assessed.
48	<p>AAFRD can:</p> <ul style="list-style-type: none"> (a) amend, add or delete a term or condition from an Administrative Order, or (b) cancel an Administrative Order, or (c) amend a clerical error in an Order. 	As progress is made in correcting the problems, the Order may no longer be required. The conditions in the Order should be changed to reflect the realities of the situation.
49	Prosecutions under this Act may not commence more than 2 years after the offence was committed or the date that the offence came to the attention of AAFRD.	Offences under provincial statutes are quasi-criminal offences. Therefore the default limitation period would be 6 months. This provision is necessary to extend the limitation period to 2 years. This is consistent with other provincial Legislation.

50	<p>A person who:</p> <ul style="list-style-type: none"> (a) contravenes sections 1,2, 4, 5, 6, 7, 9,10, 11, 12, 13 and 14 of the Act; (b) obstructs an inspector or investigator in the discharge of his duties (c) provides false or misleading information pursuant to a requirement under this Act; (d) fails to provide information as required under this Act; <p>is guilty of an offence.</p>	Important to specify what constitutes an offence.
51	No person shall be convicted of an offence under Section 50 if that person establishes that they took all reasonable steps to prevent commission of the offence.	Sometimes violations occur due to unforeseen circumstances such as weather or equipment failure.
52	<p>A person who:</p> <ul style="list-style-type: none"> (a) does not obtain an Approval, or Authorization, or (b) provides false or misleading information, or (c) fails to provide information <p>is liable for a fine of not more than \$5,000.</p>	Fines are tools to achieve compliance. The level of the fine for these violations is consistent with similar offences in other Legislation administered by AAFRD.
53	A person who does not notify the province that they are operating an intensive livestock operation within the prescribed time when this Act comes into force is liable for a fine of not less than \$1,000.	Fines are tools to achieve compliance. The level of the fine for these violations is consistent with similar offences in other Legislation administered by AAFRD.
54	A person who does not comply with an Administrative Order is liable for a fine of not more than \$10,000 or \$500/day.	Fines are tools to achieve compliance. The level of fines for these violations is consistent with similar offences in other Legislation administered by AAFRD.
55	<p>A person who:</p> <ul style="list-style-type: none"> (a) does not comply with an Approval or Regulation; or (b) allows manure or run-off from manure to contaminate ground or surface water; or (c) obstructs an inspector in the discharge of his duties (d) who stores manure without an Authorization or Approval <p>is liable for a fine of not more than \$5,000 for the first offence and \$10,000 for subsequent offences.</p>	Fines are tools to achieve compliance. The level of the fine for these violations is consistent with similar offences in other Legislation administered by AAFRD.

56	Where a person is convicted of an offence under this Act and the court is satisfied that the offender profited, the court may order the offender to pay the amount of the monetary benefit in addition to a fine.	Sometimes the fines from an offence are far less than the profits made by committing the offence. This provision is a deterrent to producers who intend to violate the Act in order to make profits. These funds will be deposited in a livestock research fund.
57	If the operator knowingly contravened the Act, the maximum fine may be doubled.	Willful contravention of the Act is being discouraged.
Administration		
58	The Minister may transfer the administration of a provision of this Act by agreement in writing to any other Minister of the government, government agency, local authority or delegated regulatory authority. Where a provision of the Act has been transferred, the Minister can revoke the transfer or have government staff carry out the assigned provisions.	In some situations, it might be appropriate for other government departments, boards and agencies or municipalities to administer some of the authorities and activities (inspections) included in this Act.
59	The Minister may make regulations: (a) respecting the application forms and procedures required for Approvals, amendments and Authorizations; (b) establishing administrative and referral procedures for applications for Approvals, amendments and Authorizations; (c) respecting the transfer, sale, lease, assignment or other disposition of Approvals; (d) respecting the submission of reports and returns; (e) respecting the form, person responsible, location and length of time the records are to be kept; (f) requiring the submission of records to AAFRD and providing for the inspection of records by AAFRD; (g) respecting the membership and appointment of members to the Appeal Board;	Regulations are required to provide additional detail.

	<ul style="list-style-type: none"> (h) respecting the content of written submissions to be filed with the Appeal Board; (i) respecting the application fee for an appeal; (j) respecting the form and content of a Request for an Appeal; (k) respecting the conduct of proceedings before the Appeal Board; (l) respecting the application of manure on land; (m) governing the storage of manure; (n) prescribing the maximum concentration of substances in manure and manure by-products that may be released into air, water and soil; (o) respecting the method or instruments for determining the concentration of substances released into air, water and soil from manure and manure by-products. (p) respecting the design, location, establishment, construction, operation and reclamation of livestock operations, seasonal feeding and bedding sites and manure storage facilities; (q) governing the issuing, form and content of Administrative Orders; (r) respecting clean up of abandoned or inactive livestock operations (s) referencing the inclusion of the Standards Document in the Regulations; and (t) respecting minimum setback distances for livestock and intensive livestock operations; (u) respecting the membership, term of service, remuneration, etc. of an advisory group to the Minister; and (v) respecting the structure and operation of the peer review process and contents of an assessment report 	<p>Regulations are required to provide additional detail.</p>
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60	<p>The Lieutenant Governor-in-Council may make regulations:</p> <ul style="list-style-type: none"> (a) respecting the transfer of administrative powers under this Act; (b) delegated authority regulatory making powers. 	<p>Regulations are required to provide additional detail.</p>
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Livestock Regulations Stakeholder
Advisory Group

Proposed Regulations
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Intensive Livestock Operations

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Sustainable Livestock Production Regulations

Section	Proposed	Reason
Definitions		
Livestock Operation	Livestock operation means an operation where the livestock is confined in a facility at a density of 43 animal units per acre for greater than 90 consecutive days and the producer has to manage the manure from the facility. Facilities do not include seasonal feeding and bedding sites.	
Intensive Livestock Operation	Intensive livestock operation means a livestock operation (as defined above) where the number of animals in confinement equals or exceeds the threshold of 300 animal units.	
Approvals and Authorizations		
1	New and expanding intensive livestock operations must obtain Approvals. The Animal Unit calculations will be based on Table 1.	Operations of this size require producers to manage their manure according to prescribed standards.
2	New and expanding livestock operations that are located: (i) in a 1-in-100 year flood plain, (ii) within 100 metres of a open body of water or irrigation works, spring, or (iii) over a groundwater source which has less than 4 metres of soil between the manure storage facility and the water bearing formation. must obtain an Approval from Alberta Agriculture, Food and Rural Development (AAFRD) prior to construction.	Water resources must be protected from contamination.
3	An application for an Approval, amendment to an Approval or Authorization must be made and signed by the person who is primarily responsible for the operation, or by an agent of such a person.	This is to ensure that the person who is responsible for the operation is aware of the information contained in the application.

4	<p>An application for Approval or amendment to an Approval must include information such as:</p> <ul style="list-style-type: none"> a) the list of agencies and persons notified and the method of notification, b) any concerns raised by the persons notified, about the project and how those concerns will be addressed, c) engineering plans, d) geological and hydro-geological assessments, e) the species and stage(s) of livestock that will be raised at the facility f) a site plan showing the location of all open bodies of water, water wells and facilities, g) the legal land locations where manure will be spread for the first three years of the operation. <p>If additional information is required, AAFRD can request it. If the applicant does not supply the information within six months, or a time agreed to by AAFRD and the applicant, the application can be rejected.</p>	<p>Certain information must be provided to evaluate an operation and to set the conditions for the Approval. The applicant is responsible for providing the complete list of agencies and persons notified and method of notification used by the applicant as part of the application for Approval to be used by AAFRD in Section 18 of the Act.</p>
5	<p>An application for an Authorization to construct a solid or liquid manure storage facility must include information such as:</p> <ul style="list-style-type: none"> a) a site plan showing the location of all open bodies of water, water wells and facilities, b) the engineering drawings, and c) a geological and hydro-geological assessments. <p>If additional information is required, AAFRD can request it.</p>	<p>AAFRD must have the proposed liner design and site assessment in order to determine if the liner meets the requirements in the Standards Document.</p>

6	<p>An application for an Authorization to spread manure on snow and frozen ground must include the following information about the proposed application site:</p> <ul style="list-style-type: none"> (a) the mean percent slope, (b) a map showing the location of all open bodies of water on and adjacent to the land, (c) the size of any vegetation buffers adjacent to or surrounding the open bodies of water on the map, and (d) the soil classification and description. 	<p>AAFRD will have to inspect and authorize all fields for the winter spreading of manure. In order to determine if the field is a possible candidate, some preliminary information will have to be provided to AAFRD.</p>
7	<p>An application for an Authorization to spread manure on frozen ground for erosion control must include:</p> <ul style="list-style-type: none"> (a) the location of the land where the manure is to be applied, and (b) a letter from the local Soil Conservation Officer agreeing to the application. 	<p>The location of the field must be known. The local Soil Conservation Officer should be consulted to ensure that the manure is required to control soil erosion.</p>
8	<p>An application for an authorized manure management plan must include the following information:</p> <ul style="list-style-type: none"> (a) the crops that will be grown on the land for the duration of the requested Authorization (b) the nutrient requirements of the crops (c) the amount of manure that will be applied at each application (d) the amount of supplemental fertilizer that will be applied , and (e) the soil classification and description. 	<p>In order to assess the manure management plan, the producer will need to supply information about the crops that he/she will be growing and the soil conditions.</p>

9	<p>Prior to submitting an application for an Approval or amendment to an Approval, applicants must take all reasonable measures to notify all persons who reside or own land falling within the following prescribed radii of the intensive livestock operation:</p> <ul style="list-style-type: none"> (a) 300 - 500 animal units = .5 mile; (b) 501 - 1,000 animal units = 1 mile; (c) 1,001 - 5,000 animal units = 1.5 miles; (d) 5,001 - 10,000 animal units = 2 miles; (e) 10,001 - 20,000 animal units = 3 miles; (f) greater than 20,000 animal units = 4 miles. 	<p>People who own or reside on land next to an intensive livestock operation and manure storage site should be consulted and should have the opportunity to inform AAFRD of their concerns regarding the project. The impact the operation may have on adjacent properties is generally related to size.</p>
10	<p>Applicants applying for an Approval or amendment to an Approval, for a livestock operation located within 100 metres of a river, stream or canal must notify municipalities and persons with Approvals, Licenses and Registrations issued under the Water Act who are located:</p> <ul style="list-style-type: none"> (a) 10 miles downstream of the livestock operation if the water is used for human consumption or commercial processing of food, and (b) 3 miles if the water is used for other purposes. 	<p>Licensed water users should be notified of any potential impacts on the water supply. The license holders may also want to take some additional measures to monitor and treat the quality of the water they are using.</p>
11	<p>AAFRD can ask for additional information from people who, according to Sections 9 and 10 of the Regulations, are entitled to forward concerns about pending applications for Approvals.</p>	<p>This is to ensure that AAFRD has the appropriate information before making a decision.</p>
12	<p>Where AAFRD is considering issuing an Authorization, Approval, or amending an Approval, they can circulate a copy of the draft Approval to the agencies in Section 18 of the Act and persons as described in Sections 9 and 10 of the Regulations.</p>	<p>This allows AAFRD to get input on the Approval or amendment before it is finalized.</p>

13	When AAFRD issues or refuses to issue an Approval or amendment, the department must advise the applicant within 60 days from receipt of a completed application. Within 15 days of notifying the applicant, AAFRD must provide notice to persons identified in Sections 9 and 10 of the Regulations.	People who participated in the review should be informed of the outcome. They should also know where they can apply to have the Sustainable Livestock Operations Appeal Board hear their appeal.
Notice		
14	When an intensive livestock operation changes ownership, the new owner shall provide AAFRD with the following information: (a) the legal land location, (b) the address and phone number, of the person responsible, (c) the type of facility and the species(s) of livestock kept.	Certain information about the transfer will be required.
Nutrient Management		
15	Soil sample analysis must be conducted according to the latest edition of the <i>Manual on Soil Sampling and Methods of Analysis</i> , published by the Canadian Society of Soil Science.	The analysis for mineral nitrogen, phosphorous, electrical conductivity and sodium conductivity must be done by a standard method to be valid and comparable.
16	Manure application must not occur when the top 60 cm of soil profile, based on fall soil sampling, contains: (a) greater than 45 lbs./acre NO ₃ nitrogen in coarse textured soils (more than 45 % sand) underlain by a groundwater source with less than 4 metres of covering soil or (b) greater than 90 lbs./acre NO ₃ nitrogen in coarse textured soils (more than 45 % sand) in Black, Luvisolic, Brown or Dark Brown soils, or (c) greater than 180 lbs./acre NO ₃ nitrogen in medium to fine textured soils (less than 45 % sand) and in Black or Luvisolic soils.	There are equipment limitations to the smallest amount of manure that a producer can economically apply to the land. As a result there needs to be a specified range (minimum to maximum) so the maximum in Section 18 is not exceeded.

17	<p>Manure application must not occur when the top 15 cm of the soil profile has a:</p> <ul style="list-style-type: none"> (a) Sodium Absorption Ratio greater than 8.0 (saturated paste extract), or (b) Electrical Conductivity greater than 4.0 ds/m. 	<p>These are generally-approved ways to measure soil quality. For instance, excessive salts can negatively affect plant growth.</p>
18	<p>Manure must not be applied at more than 210 lbs./acre of mineral nitrogen or 810 lbs./acre of total nitrogen.</p>	<p>Excessive nitrogen can affect plant growth and can cause surface and groundwater contamination.</p>
19	<p>The NO₃ nitrogen levels specified in Section 16 and the mineral nitrogen levels specified in Section 18 can be exceeded if the agricultural producer has a manure management plan that has been authorized by AAFRD.</p>	<p>Crops utilize nitrogen at different rates; therefore, through proper cropping the limits set in Sections 16 and 18 can be exceeded.</p>
20	<ul style="list-style-type: none"> (i) Manure must be incorporated into the soil within 72 hours of application unless: <ul style="list-style-type: none"> (a) it is applied to a forage crop or on direct seeded lands in accordance with Section 21 of the Regulations, or (b) a municipal bylaw requires the manure to be incorporated in less than 72 hours. (ii) Section (i) does not apply if the person who controls the land obtains an Authorization from AAFRD to spread on frozen and snow-covered land, or for erosion control purposes. 	<p>The risk of run-off of nutrients and odour problems is considerably less when the manure is incorporated in the soil or applied to vegetative fields.</p>

21	<p>Surface application of manure on forage crops or direct-seeded land without incorporation is acceptable if the following minimum setback distances are met:</p> <ul style="list-style-type: none"> (i) (a) for land having a mean slope of less than 4%, 30 metres from any open body of water, spring or water well; (b) for land having a mean slope of 4% or more but less than 6%, 60 metres from any open body of water, spring or water well; (c) for land having a mean slope of 6% or more but less than 12%, 90 metres from any open body of water, spring or water well; (ii) manure cannot be applied on land having a mean slope of 12% or greater. 	<p>The risk of run-off increases with the slope of the land.</p>
22	<p>The application of manure shall not occur within:</p> <ul style="list-style-type: none"> (a) 10 metres of an open body of water using sub-surface injection equipment; (b) 10 metres of an open body of water if surface-applied and incorporated within the same working day; (c) 30 metres of an open body of water if surface-applied and incorporated within 72 hours; (d) 20 metres of a water well whether surface-applied or sub-surface injection. 	<p>Manure application restrictions are required to protect surface water bodies. There are fields where manure can be applied on frozen ground and snow without affecting water quality. These fields have to be assessed prior to the application of the manure.</p>

23	<p>(i) Manure shall not be applied:</p> <p>(a) on soils that have enough frost in the soil profile to prevent manure incorporation or percolation of snow-melt or rain, or on soils that have a sufficient snow cover to prevent manure incorporation;</p> <p>(b) between November 1 of one year and April 1 of the following year on Brown and Dark Brown soils or between November 1 and April 15 for all other soil zones, if the manure cannot be incorporated the same day.</p> <p>(ii) Sections (i)(a) and (b) do not apply if the person responsible for the land where the manure will be spread, has demonstrated to AAFRD that the application will not adversely impact ground and surface waters, and has been issued an Authorization.</p>	<p>To prevent nutrients from running-off tilled land manure should be incorporated within 72 hours. It is difficult to incorporate manure when there is frost in the ground and frost generally sets in around November 1 and remains until April 15 in central and northern Alberta.</p>
24	<p>Agricultural operators that are using manure generated by a livestock operation, when the Act is proclaimed, will have three years to comply with Sections 16, 17, 18, and 23(i) (a) and (b) of the Regulations.</p>	<p>There has to be a reasonable balance between environmental and economic sustainability and some producers may need additional time to acquire a sufficient land base for manure spreading or to expand their manure storage facilities.</p> <p>This provision assumes that the operator is not polluting. If the operation is causing problems, the individual operator will be given a specific timetable for compliance.</p>

FEEDING AND BEDDING SITES		
25	<p>Feeding and bedding sites must:</p> <ul style="list-style-type: none"> (i) not be located within 30 meters of an open body of water, or (ii) have an interceptor ditch must be constructed and operated between the site and the open body of water and the water in the ditch must be diverted away from the open body of water; or (iii) have the manure and bedding that has accumulated at the site must be removed from the site to a storage site prior to the spring melt. 	<p>Feeding and bedding sites can affect surface water quality if the run-off in the spring, from these sites, is not properly managed.</p>
RECORD KEEPING		
26	<p>The operators of livestock operations must keep records that will include the following information:</p> <ul style="list-style-type: none"> (a) the date when manure from the operation was applied; (b) the volume (or weight) of manure applied to each field; (c) the legal land location of each field where the manure is applied; (d) the size of the field; (e) the soil nutrient analysis prior to applying the manure, and (f) the persons to whom they transferred or sold their manure, the date of the transfer or sale and the amount transferred or sold. <p>Records will be kept for 5 years.</p>	<p>Records must be kept to verify that producers are complying with the nutrient management requirements in the Legislation.</p>

27	When manure is transferred or sold from a livestock operation with an Approval to another agricultural operation, the person who receives the manure must keep the records specified in Section 26 and make them available to the inspector.	Records must be kept to verify that farmers using manure are complying with the nutrient management requirements in the Legislation.
Appeal Board		
28	The Minister must appoint not more than 7 and not less than 3 persons as the Appeal Board and designate 1 of them as chairman.	Minimum panel of 3 to hear appeals. Seven members available for use for different expertise and regional representation. Ministerial appointments will be based on recommendations from AAFRD and stakeholders.
29	The term of office of an Appeal Board member is 3 years and may be renewed for an additional term with a maximum term of six years.	Membership is regularly reviewed, however, members may be re-appointed.
30	Members who hear appeals must not reside in the municipality where the proposed development is located.	This provision will help to avoid any perception of bias.
31	The Minister may prescribe the remuneration and expenses payable to the chairman and other members of the Appeal Board.	Members are to be paid per diem and travel expenses when working on appeals.
32	The Board must make available for inspection, by those people notified of the decision, all relevant documents and materials respecting the Approval and the appeal.	The purpose of such disclosure is to enable the appeal parties to better prepare for and expedite the appeal.
33	There will be a \$100 application fee for all appeals.	The purpose of a fee is to offset administrative costs.

Table 1 Proposed Provincial Animal Units

(Animals Equivalent to 300 Animal Units)

	Individual Animals	Animal Groups		Individual Animals
Dairy			Layers	
Veal calves	2400		Pullets	90000
Calves	990		Layers	36000
Feeder cattle	360			
Replacement heifers	300		Broilers	
Cows or bulls	225		Broiler breeder pullets	90000
Milking cows, IAL		150	Broiler chickens	60000
			Roasters, B. breeder hens	30000
Beef			Turkeys	
Calves	1320		Broilers, heavy hens	30000
Backgrounders	600		Heavy toms	15000
Replacement heifers	480		Breeding hens	9000
Feeder cattle	390			
Cows or bulls	300		Ducks	
Beef cows, IAL		240	Ducks	15000
Swine			Geese	
Weanlings	9000		Geese	15000
Growers	3300			
Grower / finisher	2100		Bison	
Finishers	1500		Cows or bulls	300
Gestating sows & boars	1500		Calves	1200
Gilts	900			
Nursing sows & litters	600		Elk	
Sows, farrow to nursery		1200	Elk bulls	390
Sows, farrow to weanling		960	Elk cows	570
Sows, farrow to finish		240	Calves	6000
Sheep			Deer	
Feeder lambs	4800		Deer	2400
Rams or ewes	2100		Fawns	9600
Ewes, IAL		1500		
Goats			Ratites	
Goats	2100		Ostrich	2100
			Emu	4800
Horses				
Colts or ponies	600		Wild Boar	1200
Mares and studs	300			
PMU, mares	600			
Mares, IAL		225		
IAL				
Including Associated Livestock				

Livestock Regulations Stakeholder
Advisory Group

Proposed Standards Document
for
Intensive Livestock Operations

April 2000

Introduction

This "Standards Document" outlines the requirements for the siting, design and construction of intensive livestock operations.

Manure Storage Facilities

1. General Requirements

Manure storage facilities must be designed and located to minimize odour nuisance and avoid contamination of groundwater and surface water.

1.1 Design and Construction Verification

Intensive livestock operations and livestock operations in sensitive areas must provide verification, through a Professional Engineer, that the liquid or solid manure storage facility was designed and constructed to meet the standards laid out in this document.

1.2 New Manure Storage Facilities

New manure storage facilities, including temporary manure storage, shall not be constructed within:

- (i) 100 metres of any spring or water well; and
- (ii) 30 metres of any open body of water.

1.3 Existing Manure Storage Facilities

- (1) existing manure storage facilities that are reconstructed or expanded shall not be constructed within:

- (i) 100 metres of any spring or water well, and
- (ii) 30 metres of any open body of water that permanently contains water.

- (2) section (1)(i) does not apply if the operator can demonstrate that the aquifers through which the well has been drilled are not contaminated by the operation, and, implements a groundwater monitoring program acceptable to AAFRD, and annually reports the results of the monitoring to AAFRD.

1.4 Siting in Flood Areas

- (1) new manure storage facilities and existing manure storage facilities, constructed by an open body of water that contains water permanently, must be a minimum of one metre in elevation above the 1:50 year flood stage or, if not known, one metre in elevation above the highest known flood level.
- (2) Existing manure storage facilities that are reconstructed by an open body of water that contains water intermittently must:
 - (i) be constructed so that the berms of the storage facility are at least one metre in elevation above the 1:50 year flood stage or, if not known, one metre in elevation above the highest known flood level, and
 - (ii) have a covering that will withstand erosion from a 1:50 year flood.

1.5 Odour Control

Operators must use appropriate management to mitigate odour production as approved by AAFRD.

2. Liquid Manure Storage

2.1 Design and Construction Standards for Liquid Earthen Manure Storage

2.1.1 Storage Volume

A minimum of nine months of storage volume must be provided to store all of the manure, wash water and water spillage produced by the operation.

2.1.2 Freeboard for Liquid Manure Storage

A 0.5 metre freeboard must be provided.

2.1.3 Maintain Clearance of Water Table

The bottom elevation of the storage or liner system must be constructed one metre or more above the seasonal high water table at the time of construction.

2.1.4 Surface Water Run-on

There shall be a run-on control system that prevents the flow of surface water into the storage. The system must be approved by AAFRD.

2.1.5 Surface Water Run-off

Run-off from the storage site must not enter an open body of water or leave the owner's property. The run-off control system must be approved by AAFRD.

2.1.6 Earthen Manure Storage Materials

The storage shall be constructed with:

- (i) a minimum of 10 m of natural material at a hydraulic conductivity no greater than 1×10^{-8} m/sec below the bottom of the storage and above the upper most identified groundwater source capable of transmitting contaminants beyond the farm boundary or equivalent competent material, or
- (ii) a material that provides equivalent or greater protection than (i).

2.2 Design and Construction Standards for Concrete and Steel Storage Vessels

2.2.1 The design must be approved by AAFRD.

3. Solid Manure Storage

The following criteria apply to both Temporary and Long-term Manure Storage

3.1 Surface Water Run-off

Run-off from a solid manure storage site must not enter an open body of water or leave the owner's property. The run-off control system must be approved by AAFRD.

3.2 Surface Water Run-on

There shall be a run-on control system that prevents the flow of surface water into the storage. The run-on control system must be approved by AAFRD.

3.3 Seasonal High Water Table

The bottom elevation of the manure storage must be constructed a minimum of one metre above the seasonal high water table at the time of construction.

3.4 Fly Control

Producers must use appropriate management to control flies. The method of control must be approved by AAFRD.

3.5 Long-term Solid Manure Storage

The storage shall be constructed with:

- (i) a minimum of 2 m of natural material at a hydraulic conductivity no greater than 1×10^{-8} m/sec between the bottom of the storage and the upper most identified groundwater source capable of transmitting contaminants beyond the farm boundary, or
- (ii) a material that provides equivalent or greater protection than (i).

3.6 Temporary Solid Manure Storage

3.6.1 Storage Time

Temporary field storage of solid manure is only permitted for a period not exceeding 6 months in a given location over a three-year period.

4. Feedlots

Soil, topographic and hydrologic conditions must be considered in the siting of the feedlot facility to prevent the movement of manure nutrients into surface water and groundwater.

4.1 Permeability of Site

- (i) avoid sites with porous soils and/or fractured bedrock that would allow contaminants direct access to groundwater and
- (ii) avoid over-cleaning of the lot surface that would disturb this compacted layer

4.2 Surface Water Management

Surface run-on water originating outside the feedlot site must be diverted around the feedlot site. The run-on control system must be approved by AAFRD.

4.3 Surface Lot Drainage

Drainage must be provided within the feedlot or animal holding areas to prevent the retention of contaminated liquids on the lot surface. Manure run-off from drainage must not enter an open body of water or leave the owner's property. Feedlot drainage must be directed to a catch basin or handled in a method approved by AAFRD. The run-off control system must be approved by AAFRD.

4.4 Flood Protection

Feedlots must be:

- (i) a minimum of one metre in elevation above the 1:50 year flood stage, or
- (ii) if not known, one metre in elevation above the highest known flood level,
or
- (iii) on land known not to flood.

4.5 Seasonal High Water Table

The bottom elevation of the feedlot pens must be constructed a minimum of one metre above the seasonal high water table at the time of construction.

4.6 Non-Operational Feedlots

Unused feedlot pens must be completely cleaned of manure within one year of abandonment.

5. Feedlot Catch Basins

5.1 Catch Basin Storage Volume

Catch basin volume must be designed and operated to accommodate a one in 25-year 24-hour storm event.

5.2 Freeboard

0.5 m of freeboard must be provided.

5.3 Utilize Catch Basin Contents

Run-off and catch basin contents must be handled so that it does not contaminate ground or surface waters. AAFRD must approve the management plan.

5.4 Surface Water Management

Surface run-on water originating outside the catch basin design area must be diverted around the area. AAFRD must approve the run-on control system.

5.5 Seasonal High Water Table

The bottom elevation of the catch basin must be constructed a minimum of one metre above the seasonal high water table at the time of construction

5.6 Liner specifications for catch basins that hold run-off for less than 60 days

The catch basin must be constructed with:

- (i) a minimum of 2.5m of natural material at a hydraulic conductivity no greater than 1×10^{-8} m/sec between the bottom of the catch basin and the upper most identified groundwater source capable of transmitting contaminants beyond the farm boundary, or
- (ii) a material that provides equivalent or greater protection than (i).

5.7 Liner specifications for catch basins that hold run-off for greater than 60 days

The catch basin must be constructed with:

- (i) a minimum of five metres of natural material at a hydraulic conductivity no greater than 1×10^{-8} m/sec between the bottom of the catch basin and the uppermost identified groundwater source capable of transmitting contaminants beyond the farm boundary, or
- (ii) a material that provides equivalent or greater protection than (i).

Evolving Technologies

Alternative methods of manure application or management systems that can be shown to effectively retain nutrients on the land, reduce odour production, or significantly reduce potential water quality impacts can be proposed to AAFRD for approval.

Amendments to the Standards Document

This Standards Document will be reviewed at least every five years after the legislation comes into effect. AAFRD will accept and compile written comments on the contents of this Standards Document at any time, and will review all comments received at the next review. The AARD official responsible for the Standards document may institute a review and amendment of this Standards Document at any time. All proposed amendments to this Standards Document will be reviewed by government and other stakeholders. The AAFRD official shall have the final decision on amendments made to this Standards Document. Amendments to this Standards Document shall become effective when published by AAFRD.

Livestock Regulations Stakeholder Advisory Group

Proposed Definitions For Intensive Livestock Operations

April 2000

Glossary of Definitions

“adverse effect” means impairment of or damage to the environment, human health or safety or property.

“animal units” means the number of animals of a particular category of livestock that will excrete 73kg of total nitrogen in a 12 month period.

“catch basin” means any excavated, dyked or walled structure or combination of structures designed to intercept and temporarily store run-off water contaminated by livestock manure.

“compost” means a stable humus-like material that has been created by the bio-oxidation of manure.

“earthen manure storage” means a structure constructed primarily of natural geological materials where liquid livestock manure is stored.

“electrical conductivity (EC)” is a measure of soil salinity

“feedlot” means an uncovered livestock facility where livestock are confined solely for the purpose of growing or finishing and is sustained by means other than grazing.

“gleyed layer” means the relatively impervious gleyed layer formed by the hooves of ruminant animals in contact with livestock manure in an active feedlot.

“grazing area” means a pasture or rangeland where livestock are sustained primarily by feed forage growing on the pasture or rangeland.

“groundwater source” means an underground formation capable of transmitting sufficient quantities of water for human consumption.

“incorporation” means tillage, plow down, or direct injection of land-applied livestock manure into the soil.

“intensive livestock operation (ILO)” means an operation where the number of animals in confinement on a farm equals or exceeds the threshold of 300 animal units and where the livestock are confined in a facility(ies) at a density of 43 animal units per acre for greater than 90 consecutive days and the producer has to manage the manure generated at the facility(ies).

“leachate” means liquid that has percolated through and drained from livestock manure and has extracted, dissolved or suspended materials from the livestock manure.

“liner” means a continuous layer, constructed of natural or synthetic materials, beneath and on the sides of the storage structure, preventing the downward or lateral migration of the liquid manure.

“livestock” means domestic animals and birds, but does not include fish.

“livestock manure” means livestock excreta, associated feed losses, bedding, litter, soil and wash water.

“livestock operation” means an operation where the livestock are confined in a facility at a density of 43 animal units per acre for greater than 90 consecutive days and the producer has to manage the manure from the facility. Facilities do not include seasonal feeding and bedding sites.

“manure storage facility” means a structure, reservoir, catch basin, earthen storage, tank, or area where a berm has been constructed, for containing livestock manure prior to the manure being used or disposed. It does not include a vehicle or any mobile equipment used for transportation or disposal of livestock manure or under-barn concrete storage pits used for short-term containment of livestock manure.

“modify” in respect to a manure storage facility, does not include routine maintenance or repairs.

“operation” means buildings, shelters, fences, corrals or other structures that confine, or are capable of confining, livestock for feeding and rearing purposes. Includes seasonal bedding and feeding sites.

“operator” means a person responsible for the operation.

“open body of water” means the bed and shore of an irrigation canal, drainage canal, reservoir, river, stream, creek, lake, marsh, slough or other body of water, but does not include the following:

- (i) waterworks system;
 - (ii) reservoirs, lakes, marshes, or sloughs that are completely surrounded by private land, that have an area of less than four hectares and have no outflow of water beyond the private land;
 - (iii) irrigation and drainage canals that are completely surrounded by private land and have no outflow beyond the private land;
 - (iv) roadside ditches;
 - (v) wastewater systems;
 - (vi) storm drainage systems;
- temporary streams on private land that do not flow beyond the boundaries of the land controlled by the operator

“pollution” in relation to surface water, groundwater, or soil, means the presence in the water or soil of substances or contaminants that are foreign to or in excess of the natural constituents of the water or soil, or that adversely affects the uses of the water or soil.

“professional agrologist” means an agrologist as defined in the Agrologist Professions Act of Alberta.

“professional engineer” means an engineer as defined in the Engineering, Geological, and Geo-Physical Professions Act of Alberta.

“run-off” means any rainwater or meltwater that drains as surface or subsurface flow from the feeding, manure storage or manure application areas associated with the operation.

“run-on” means any rainwater or meltwater that drains as surface or subsurface flow into the feeding or manure storage areas associated with the operation.

“seasonal feeding site” means an overwintering area where mature breeding animals and their unweaned young are fed and sheltered.

“seasonal high water table” means the estimated average highest level to which the watertable rises over the year.

“sodium adsorption ratio (SAR)” means the ratio of exchangeable sodium to the square root of the exchangeable calcium and magnesium divide by two.

$$SAR = Na / ((Ca+Mg) / 2)^{1/2}$$
 Where Na, Ca and Mg are concentration values from a saturated paste extract expressed in mmol_c/L.

“solid livestock manure” means livestock manure that is 20% or more solid matter and does not flow when piled.

“temporary manure storage” means the temporary storage of solid manure to facilitate land spreading, which has been delayed due to climatic and seasonal constraints.

“water well” means an opening in the ground, whether drilled or altered from its natural state, that is used for

- (i) the production of groundwater for any purpose, or
- (ii) obtaining data on groundwater, or
- (iii) recharging an underground formation from which groundwater can be recovered, and includes any related equipment, buildings, structures and appurtenances.